Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

God, God-Man, Man-God, or by what name soever God may will. That experience is your religion's sole deep concern. That experience *is* you; it *is* God. Perhaps this will appeal, I say, to men of iron constitution. God grant this." In one place the author very happily denominates his religion of humanity as a "mysticism of the will." In spite of the emancipation from the religion of the past most of the ideas of the new religion sound quite familiar, though often inverted. Traditional religion has taught that in God we live and move and have our being; the new religion teaches that God lives and moves and has his being in us. The old said God made us, the new exhorts us to make God. The old said God made man in his own image, the new says let man make God in his own image. The old regarded God as infinite and perfect, the new regards him as finite and imperfect. Psychologists have noted that when one puts his head between his feet and looks at the landscape inverted he sees the colors of nature with a new and pristine vividness. No doubt there are temperaments in which the religious consciousness is similarly vivified by inversion. To certain temperaments no doubt this volume will present a powerful and ennobling appeal. Most minds, however, seem to require at least an illusion of objectivity in the object of their worship. The religious nature of few men can be satisfied by a conscious product of the "creative virtue of a religious enthusiasm." The author characterized the religions of the past as "vague" and "vacuous." To the present writer it would seem that these adjectives might apply no less to the new.

In an appendix are republished the two articles, "An Outline of Cosmic Humanism" and "The Cosmic Character," which appeared in numbers 3 and 12, Vol. VI., of this JOURNAL.

F. C. FRENCH.

UNIVERSITY OF NEBRASKA.

Wellesley College Studies in Psychology. No. 1. *A Study in Memorizing Various Materials by the Reconstruction Method.* ELEANOR A. McC. GAMBLE. Lancaster, Pa., and Baltimore, Md.: The Review Publishing Co. Pp. v + 210.

The latest monograph supplement of the *Psychological Review* by Professor Eleanor A. McC. Gamble is an account of a series of experiments on herself and a number of other subjects in memorizing smells, colors, and nonsense syllables. The experiments were conducted mainly at the psychological laboratory of Wellesley College during a period of seven years ending in December, 1908. The author of the monograph was the chief subject as well as the chief experimenter.

The memory tests were made by the reconstruction method, which is as follows: A number of objects are presented in succession; the subject is then required to rearrange these objects in the same order in which they were presented. The mode of procedure in the experiments with smells, which formed the most novel part of the investigation, was to place the scents in bottles of uniform size and shape which were handed to the blindfolded subject, one at a time, at intervals of about five seconds; the subject removed the stoppers and smelled the contents. After the presentation of a series was completed, the subject was again handed the first bottles as a starter, required to take up the others and, guided by smell alone, to arrange them on the table in the same order in which they had been first presented to her. If the subject failed to reproduce the series in the right order, the bottles were again presented as at first and she tried again. This was repeated until the series was correctly reproduced.

These experiments were of a rather rough nature, as the author takes pains to assert. The experiments with smells were unavoidably so, and those with colors and syllables were not made of a more rigorous character in order that the results derived from them might be comparable with those from the smell experiments. No exact time was observed between each presentation of a stimulus, and none between the completion of a presentation series and the beginning of reconstruction. The experiments were conducted through a long period of time, under various circumstances, with subjects of unequal training. The author believes, and justly, that the great number of experiments and the uniformity of the results lends significance to the work. Within the limits imposed by the character of the investigation an immense amount of painstaking was evidently expended. The monumental labor of the chief subject and experimenter, the author of the monograph, deserves hearty commendation.

As many as 129 different scents were used at one stage of the investigation, but these were reduced during the last two years to 83. One hundred and thirty-six different colors were used, consisting of two-inch squares cut from the Milton Bradley kindergarten papers. The nonsense syllables were constructed in accordance with the precautions that have been worked out by various investigators.

The most striking result obtained from these experiments was the small number of repetitions necessary for a perfect reconstruction of a series as compared with the number of repetitions necessary for the perfect recitation of a series of nonsense syllables by the method of complete memorizing. In these experiments, it should be remembered, the subject was required to memorize the order in which the members of a series were presented, but not the members themselves. The principal subject was able to reconstruct series of 41 and 81 smells with an average repetition not exceeding 2.8. When the subject's practise was at its maximum, series of 30 smells were perfectly reconstructed with an average of 2.2 repetitions. A less degree of perfection, called by the author "correct reconstruction," meaning reconstruction after hesitation and fumbling, was attained with 1.8 repetitions. With series of from 13 to 16 members at the outset of the color experiments, the average number of repetitions for perfect reconstruction was 2.1. The serial order of nonsense syllables slowly presented was just as easy to learn as the order of smells and colors. The effect of practise was to reduce the number of necessary repetitions to the same number for longer and longer series.

These results are in striking contrast to those obtained by Ebbinghaus by his method. He was able to recite series of 12 syllables (read rapidly) only after from 14 to 16 repetitions, series of 16 only after 30 and series of 36 only after 55. The number of repetitions increased with surprising rapidity as the length of the series increased. The limit of the length of the series Ebbinghaus could memorize was sharply defined. He found that when the number of series members exceeded even by a little the maximal number which one could just master after a single presentation, the number of members retained was less than when the series was shorter. Our author found, on the contrary, by her method of memorizing, that the number of repetitions necessary to memorize did not increase with surprising rapidity as the series length increased, but increased with surprising slowness. The subjects were generally able to remember after one presentation of a long series rather more than after one presentation of a shorter series. And, finally, there was no sharp limit to the length of the series which a subject could reproduce after a single presentation.

The fewer repetitions necessary by the reconstruction method than by the methods of Ebbinghaus and of Müller and Schumann are ascribed by the author to the leisurely recall and the slow method of presentation in the reconstruction method. As a consequence of this slowness, there is a lessening of the conflict between incipient associations—associations do not cross and interfere with one another—and there is a development of a memorizing technique which can not be gained with rapid repetition. Highly interesting introspective observations are given by the author of her own technique, which does not consist of mnemonic devices but of better apprehensions, grouping, and associating stereotyped imagery with non-verbal material. With her acquired technique she was able to memorize 81 nonsense syllables by the method of complete memorizing in less time than she had done it by the reconstruction method—in three quarters of an hour, the syllables being presented and recited at approximately one second intervals. It had taken about an hour and a quarter by the reconstruction method.

The author offers some valuable suggestions on the conduct of the memory and concludes with the observations that practise is probably transferable only within very narrow limits, that one's brute retentiveness can not be improved by training, but that a very great difference can surely be made by training in what one can do with one's brute retentiveness along specific lines.

ABRAM LIPSKY.

NEW YORK.